

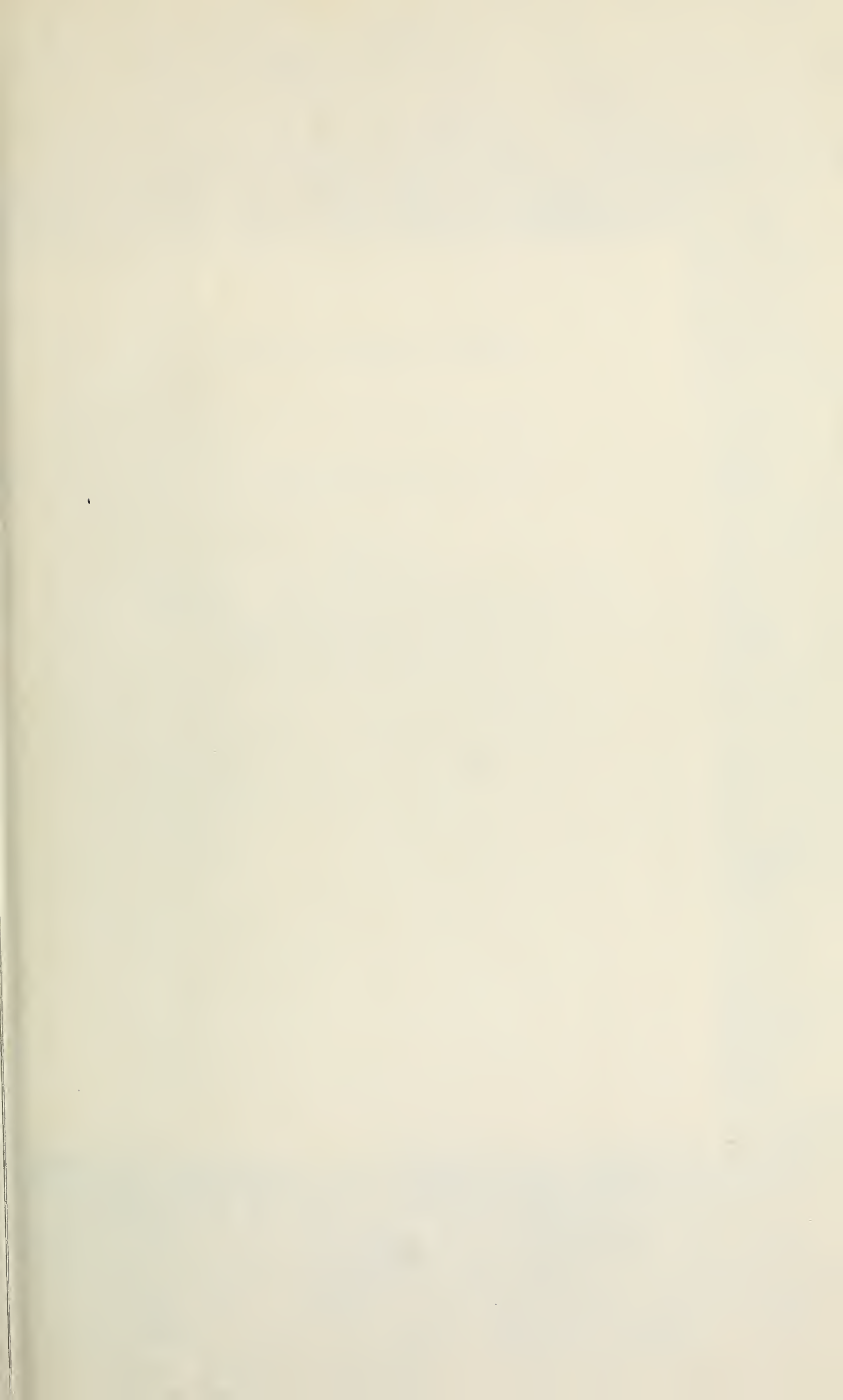
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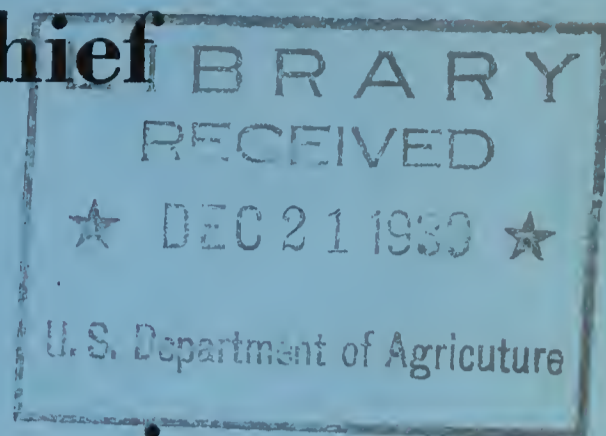


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Report of the Chief
of the
Bureau of
Agricultural Economics



1939

1938/39

REPORT OF THE CHIEF OF THE BUREAU OF AGRICULTURAL ECONOMICS, 1939

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF AGRICULTURAL ECONOMICS,
Washington, D. C., October 15, 1939.

HON. HENRY A. WALLACE,
Secretary of Agriculture.

DEAR MR. SECRETARY: I present herewith the report of the Bureau of Agricultural Economics for the fiscal year ended June 30, 1939.

Sincerely yours,

HOWARD R. TOLLEY, *Chief.*

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REORGANIZATION

Fiscal 1939 was reorganization year for the Bureau of Agricultural Economics: A year that witnessed transformation of the Bureau from an agency dealing in economic analyses and performing a multitude of statistical, service, and regulatory duties into an agency functioning with a Department-wide scope both as a clearinghouse for agricultural planning in the Nation and as an economic-research organization.

Reorganization of the Bureau was directed by the Secretary of Agriculture on October 6, 1938, as a part of the departmental reorganization of that date, and became fully effective on July 1, 1939,

with the operation of the 1940 Department of Agriculture Appropriation Act. Hence, the fiscal year 1939 was devoted in large part to reconstitution of the Bureau to meet the responsibilities placed upon it by the Secretary. Many activities and functions of the previous Bureau remain; others were transferred to the present Agricultural Marketing Service; still others became a part of the present Bureau through transfer from other agencies. All have been recast or given new direction to conform to the Secretary's intent to establish a general departmental planning agency that also would bring to a focus the results of economic and social research and the influence of farmer judgments as expressed through community, county, and State planning committees.

The Secretary said in his memorandum October 6:

It is imperative that we establish over-all planning work for the whole Department in order to provide for proper functioning of the many new activities authorized in recent years by the Congress. * * * This has become all the more necessary since the Department last July entered into a significant and far-reaching agreement with the Land-Grant College Association. Under this agreement, the colleges and the Department are establishing democratic procedures that will give farm people an effective voice in forming, correlating, and localizing public agricultural programs. Farm people and official agencies in the States are now forming community, county, and State groups to carry on land-use planning and program building. In the expanded Bureau of Agricultural Economics, the Department is now establishing its part of the machinery needed to integrate State and local planning with general planning and program-forming activities within the Department.

The story of the Bureau's year is, in the main, the story of its endeavor to comply with those instructions. As it is now organized, all the work of the Bureau heads up in the Chief, who is responsible to the Secretary for performance of the duties outlined here. To further the performance of these duties, six major groups of activities have been designated, in the charge of key men who are responsible for the development, coordination, and integration of Bureau work. These men are assigned one to each of these fields: (1) General planning; (2) rural welfare; (3) conservation and land use adjustment; (4) market planning; (5) the agricultural outlook; and (6) program relations.

The men in charge of these general fields of activity function in cooperation with the Bureau's divisions and other agencies of the Department. They are also members of inter-Bureau coordinating committee, to which all plans—whether the product of county planning committees, technical suggestion, or administrative proposal—are being sent and from which are to come the recommendations the Chief is to make to the Secretary through the Agricultural Program Board.

The Chief of the Bureau is the chairman of this coordinating committee. Its membership includes a representative from each of the departmental agencies that have an important interest in planning for action, so that views of these agencies may influence the Bureau's recommendations throughout the process of formulation.

In addition, the heads of all the Bureau's divisions are members of the coordinating committee. Such a committee would be unwieldy if it attempted to act at all times as a unit. It operates, therefore, on a very flexible basis, with numerous subcommittees set up to deal with specific problems. The services of a subcommittee are termi-

nated with the solution of its problem. Members of each subcommittee will include representatives of every agency interested in such a problem.

The findings of each subcommittee will go directly to the Chief of the Bureau and, after his approval, from the Chief to the Secretary through the Agricultural Program Board of the Department, composed of the heads of the Department agencies, to be put into effect if the Secretary concurs in the finished product of this process.

Attached to the office of the Chief are seven coordinate lines of work designed and staffed to serve the Bureau generally from central points in the fields of management, operation, and administrative work in cooperation with the administrative, clerical, fiscal, and research staffs of the divisions in Washington and the field service of the Bureau. Each staff functions as a clearinghouse for the respective type of work indicated by its title, namely: budget and estimates; employment records; fiscal (audits, pay rolls, and accounts); library; mails, files, and visa; organization and classification; and procurement.

The divisional organization of the Bureau is not compartmentalized into separate research and planning units; in nearly every instance, the two functions are merged in the activity of each division. The divisions of the Bureau are: Agricultural Finance, Economic Information, Farm Management and Costs, Farm Population and Rural Welfare, Land Economics, Statistical and Historical Research, State and Local Planning, Program Surveys, Marketing and Transportation Research, Program Study and Discussion, Program Development and Coordination, Marketing Programs and Coordination. The nature of the specific duties performed by each will become apparent in the course of this report. It should be emphasized, however, that rigid jurisdictional lines have no place in the Bureau as now constituted.

PLANNING FOR NATION AND NEIGHBORHOOD

Of the greatest significance in the present Bureau are its methods of bringing farmer opinion to bear upon the formulation of agricultural programs. Its objective in setting up these channels of influence has been to provide for the fusion of farmer, technical, and administrative views throughout the process of program and policy creation, beginning with the local community.

STATE AND LOCAL PLANNING

In March the Bureau undertook to promote, in cooperation with State agricultural colleges, the building of comprehensive land use plans, policies, and programs through the joint participation of farmers, technicians, and administrators. Such plans and policies are designed to secure the coordination and correlation of public and group action at community, county, State, and national bases, and for the translation of appropriate conclusions on desirable agricultural adjustments into specific plans and programs for local, State, and departmental action agencies.

The Bureau maintains a representative in each State who works closely with action agencies in the coordination of program objec-

tives and operations, and with State agricultural colleges responsible for the educational work, and with research organizations in the investigational and technical aspects of planning and program development. Seven regional representatives of the Bureau maintain advisory liaison relationships with State representatives and action agencies in the field. A small administrative and technical staff in Washington formulates general procedures for the conduct of planning work and reviews and analyzes the planning done in the States before its adoption as a basis for program revision and coordination, or for the formulation of new programs.

Planning activities in the field are conducted through State land-use planning committees consisting of representatives of State and departmental agencies working in the field of agriculture and farmers representing important type-of-farming areas. The State extension director is chairman, and the State representative of the Bureau is secretary of the committee. These representatives and the State extension and experiment station directors or their representatives constitute the joint land-grant college-Bureau of Agricultural Economics committee which acts as an informal working subcommittee of the State land use planning committee. In the counties planning is conducted by county committees on which State and departmental agencies are represented, but on which farmers predominate. Subcommittees organized on a community basis do much of the detailed work upon which county plans are based.

ORGANIZING FOR PLANNING

Much of the Bureau's State and local planning work to date has been organizational. Working relationships have been clarified and described in memoranda of understanding which have been negotiated with 45 of the land-grant colleges. Project agreements covering the details of the first year's work are being entered into with these 45 institutions.

Three major lines of planning work in the counties are known as preparatory work, intensive planning work, and unified county programs. Preparatory work, designed to acquaint county agents and local planning committees with the scope and objectives of land use planning and to prepare them to engage in this work, has been inaugurated in about 830 counties. Intensive planning work, involving area mapping and classification and the formulation of immediate and long-time land use plans and adjustment goals for the county, was undertaken in 447 counties representing the major type-of-farming areas in each State. Forty-four counties in 39 States have been selected, and 2 other States have tentatively selected counties for the development of unified county programs. The remaining States are in the process of selecting unified-program counties. Unified county program development involves the translating of land use plans into action. It involves coordination and revision of existing departmental, State, and local programs, and the formulation of new programs to best achieve recommended adjustments in land use and rural institutions.

The participation and interest of farmers and State officials in these phases of the work have been enthusiastic, and reports received from many sections of the country indicate that a wide variety of

benefits are being and will be achieved for agriculture through the operation of the county planning program.

During the year 1939-40, the preparatory, intensive, and unified phases of county planning will be continued and strengthened. The guidance and information supplied to county committees will be increased, and emphasis will be placed upon obtaining wider and truly democratic farmer participation. Area mapping and classification are expected to be completed in 447 counties and initiated in about the same number of new counties. At least 1 county in each State and as many more as possible, are to be aided in developing unified programs for administration in 1941.

NATIONAL PROBLEMS AND POLICIES

The Bureau conceives that a part of its responsibility, in dealing with large national questions, is to call attention to major problems in which agriculture has an important stake and to possible lines of attack on those problems. As a means to that end, it has inaugurated a series of special reports summarizing pertinent available knowledge concerning specific national problems and outlining the available approaches to solutions. The first of these was the report, *Barriers to Internal Trade in Agricultural Products*, already issued. Three others, one dealing with technological and related developments, one with principal aspects of farm labor, and one dissecting and appraising subsistence homestead projects administered by the Farm Security Administration, are now in preparation. This last has been undertaken by the Bureau at the request of the Farm Security Administration.

INTERNAL TRADE BARRIERS

The special report dealing with the alarming growth of interstate and interregional barriers to the free movement and sale of farm products within the United States was issued in March. The report was based on an extensive survey of Federal, State, and municipal legislation and regulations. This survey was made in close cooperation with State officials, including State commissioners of agriculture, State marketing officials, and the Council of State Governments.

This study of internal trade barriers has attracted a great deal of interest. The Council of State Governments and several other groups are now actively working on a program to eliminate unnecessary trade barriers and to provide for the free movement and unhampered sale of agricultural products in all markets. This does not mean, of course, the abandonment of all regulations dealing with the marketing of farm products. There is and will be a continuing need for regulations to protect the consumer against injurious foods, to protect the farmer against the spread of insect pests and diseases, and for similar purposes. But the study has revealed that many of the existing laws and regulations are discriminatory, that in effect they are similar to import duties for the protection of small groups of producers at the expense of other producers and of consumers.

Research is being continued on this problem, in cooperation with a number of other agencies, including all Bureaus of the Department of Agriculture, several other Federal departments, and several organizations of State officials. Since the issuance of the Bureau's report on

internal trade barriers, the State legislatures have killed about 60 bills which would have raised additional barriers to interstate trade in farm products. A few important barriers were eliminated. Efforts are being made to develop a constructive program in which the Federal and State governments can cooperate, for the lowering of the worst of the remaining trade barriers in the next 2 years.

AGRICULTURAL TECHNOLOGY

Last April the Bureau initiated a study of the consequences of current technological and related developments with a view to forecasting resultant changes in agriculture in the next 10 years. The flow of technological improvements—particularly in the fields of chemistry, biology, farm equipment, transportation, and marketing—brings about changes in agricultural production, farm organization, and farm practices that may profoundly affect rural welfare. Although some persons benefit from the resulting changes, the consequences, as in the case of displaced tenants or disadvantaged small farmers, may be serious distress and social maladjustment. The trend of developments may even be contrary to objectives of agricultural programs. A knowledge of these changes is important in outlining agricultural programs and in planning (1) to avoid serious maladjustments or to cushion the shock of too rapid changes, and (2) to take advantage of new opportunities offered by new techniques.

The study of technological developments is intended to provide a basis for (1) directing the effects of new developments into socially desirable channels, (2) guiding agricultural programs so as to minimize the effects of maladjustments, and (3) providing information regarding the effects of technological trends on national policies. The phase of the technological study now under way attempts to summarize through committees composed of representatives of several bureaus of the Department, the progress that has been made in, and the potentialities of, the more important technological developments. The primary objective is to determine the incidence of benefits derived from these developments, to ascertain which groups in agriculture will be placed at a disadvantage as a result, and to suggest ameliorative programs if possible.

FARM LABOR

The research study being made by the Committee on Farm Labor is nearing completion. This report will contain data concerning the civil, political, social, and economic status of our farm laborers. The report will show the civil and political restrictions and the living and social conditions under which large numbers of farm workers labor; age, sex, numbers, and distribution; working conditions and employer treatment; and the presence or absence of social legislation in their behalf. The report will deal with the farm-labor market and how it is affected by industrial maladjustment and population pressure, and will tell the story of unpaid family labor, wage hands, seasonal workers, migratory labor, and children who work hard for little or no pay. The underlying conditions affecting farm-labor supply and demand will be discussed, together with the economic factors and the mental attitudes that hinder solution of these problems. The report will offer suggestions for improving farm laboring conditions.

PROGRAM STUDY AND DISCUSSION

Development of program study and discussion, previously an activity of the Agricultural Adjustment Administration, became a function of this Bureau with the reorganization of the Department.

Probably 2,000,000 farm men and women in the last 4 years have taken part in discussion groups organized by the land-grant colleges, with assistance in the way of knowledge of techniques and provision of study materials by the program study and discussion workers of the Department. Under the departmental reorganization, this work is given the Bureau as an aid to county agricultural planning development.

Program study and discussion work now is aimed at (1) organizing leadership-training schools in cooperation with the State agricultural colleges and the several administrative and educational agencies of the Department, with staffs of experts drawn from the State colleges, liberal-arts universities, research foundations, farm organizations, and governmental agencies; (2) cooperating with State agricultural colleges, farm organizations, and other agencies in promoting, organizing, and conducting discussion groups in communities; and (3) preparing and supplying discussion outlines and materials and otherwise assisting farm people, agricultural colleges, and other agencies in promoting discussion of current agricultural problems, in the effort to provide a better basis for understanding by agricultural leaders, farmers, State and Federal agencies, and others, of the broad social and economic implications of agricultural adjustment, rehabilitation, conservation, and related policies.

In cooperation with the State discussion leader, appointed by the extension services in most States, many training conferences have been held for local leaders of farmer discussion groups. These local leaders, in turn, meet several times each winter with groups of 15 to 20 people in various communities for informal discussions of rural problems.

To assist the leaders, the Bureau will prepare and distribute in readable, nontechnical language a series of publications containing both factual material and expressions of divergent points of view current in the country on the topics for discussion.

In its schools for agricultural workers, the Bureau emphasizes open, critical discussions and concentrated study of the question, "What is a desirable national agricultural program?" To date, some 55 of these schools have been held, in 35 States, with an aggregate attendance of about 10,000 persons. The schools usually remain in session for 4 days. Their purposes are to enable farm leaders and agricultural workers to obtain a better understanding of present agricultural programs and policies; to give them a chance to renew their perspectives on agriculture as a whole; to stimulate independent thinking on social and economic questions, and to help to prepare leaders for county agricultural-planning activity, and for local farmer discussion groups.

RELATING RESEARCH AND PLANNING

Prominent among the obligations of the Bureau in its present position in the Department is the obligation to create a living rela-

tionship between agricultural planning and economic and social research. The objective in the construction of the present Bureau has been to give responsibility both in planning and in research to virtually every one of its divisions. The necessity for making the results of research an inherent part of the planning process accounts in considerable degree, for the previously mentioned attempt to avoid hard-and-fast jurisdictional lines between these divisions.

COOPERATIVE RESEARCH IN PLANNING

The Bureau will give much attention to the formulation of cooperative research projects to help guide the development of agricultural planning, and to the setting up of observational studies to learn the effect that various action programs, and the unified programs, are having on the agricultural economy in local areas. It will sponsor several cooperative demonstrational studies to aid in improving the techniques and procedures of land-use planning.

The Washington staff will analyze and summarize reports, maps, and recommendations prepared by local committees, and will develop aids to the orientation and synthesis of county plans at the State and regional levels. These efforts will facilitate the incorporation of farmers' planning and thinking in the action programs of the Department. In the field, the Bureau will inaugurate systematic examination and appraisal of flood-control, water-facilities, land-acquisition, and other area plans developed by technical survey agencies, and will strive to integrate this work with farmer planning activities.

Fundamental to much of that work are the collections and services of the Bureau library, which also serves other economic units of the Department. Through its processed monthly publication, *Agricultural Economics Literature*, practically all significant material on agricultural economics published throughout the world is reviewed, briefed, or noted. This publication has a strictly limited but virtually world-wide distribution. Besides the library's continual reference work and circulation of books and periodicals to the technical and economic staff of the Bureau, it issues comprehensive bibliographies on subjects of research by the Bureau—notably land utilization, agricultural labor, income, rural psychology, price fixing, and transportation.

ADJUSTMENTS IN LAND USE

The Bureau's work in land economics is concerned with research and planning relating to adjustments in the use of land. Some adjustments involve direct changes in land use such as reforestation of abandoned cropland; others are in the nature of indirect changes such as a more effective public or group control over the use of range lands to eliminate overgrazing. Adjustments of a direct nature may be accomplished by public purchase of land and development for an alternative use, by flood control through the construction of dams and through erosion-control measures, and by the provision of water facilities on tracts of land, like wells, stock-water tanks, and water spreaders.

Adjustments of an indirect nature may be accomplished through changing certain practices and customs and modifying institutional forces affecting the relationships of farm people to the use of land, such

as land tenure, property taxation, and the structure of rural local government. Land use adjustment is thus a process requiring considerable time for changes to be visibly accomplished, and requiring also careful planning and research preliminary to action.

Many requests from State and local officials for technical assistance in land-use adjustment, especially those of an economic and institutional nature, indicate a widespread and increasing awareness of land problems. They also indicate a realization that local steps must be taken to complement and supplement the programs of Federal agencies, and to lessen huge outlays required for purely Federal activity. Active and articulate county planning committees now form the nucleus of such an approach to local land use problems. In response to requests from such sources, practical research attention has been given to land use classification, rural zoning, grazing-district legislation, revision in taxation procedure, landlord-tenant relationships, and rural government and finance. Many studies have been made in particular areas to analyze the place of land use adjustment measures under specific local conditions, and to determine how local planning and action programs can be fused with those developed from State, regional, and national standpoints. A wide range of adjustments, complementing and supplementing Federal measures, can be accomplished by modifications of State laws, local ordinances, and administrative practices, or by other measures of a State and local nature.

It is clear that the development of land-utilization policy depends upon and is stemming from the desires of farm people for land use adjustments and for factual knowledge of land use conditions, problems, and solutions in various areas. The contributions the Bureau is making toward policy formation are being brought into an integrated program, modified and adapted to current needs of communities and the Nation as a whole.

RESEARCH AND CONSERVATION PROGRAMS

The Bureau has continued its observational studies of the regional conservation programs in selected areas, and has assumed major responsibility for outlining and participating in studies of the effectiveness of experimental county programs and experimental phases of regional conservation programs. These studies have focused attention on the reasons for the lag in conservation accomplishments as compared with expectations. Recognition and analysis of these reasons serve as a foundation upon which more effective programs of conservation and adjustment can be built.

Five of the twenty-six studies in the field of agricultural conservation and adjustment concern special phases of regional problems. Special problems of this type on which reports recently have been completed include: (1) Production of food and feed crops in relation to farm needs in the South, (2) the 1938 restoration land program, (3) relation of the agricultural conservation program to low-income farmers in the Northeast, and (4) opportunities for profitable use of additional forage in the Corn Belt.

How best to use the land released from cotton production through programs of the Agricultural Adjustment Administration and the possible use of such land for production of farm food and feed crops

formed the central question in the cooperative study of farm food and feed. Participants with the Bureau were the Agricultural Adjustment Administration and the extension services and experiment stations in the cooperating States. Further objectives were to ascertain how self-sufficient southern farm people are in various areas with respect to commodities now grown on their farms and, from a physical standpoint, how self-sufficient southern farmers could be.

The Bureau initiated a study of the restoration land phase of the agricultural conservation program in the spring and summer of 1938. This was carried out in cooperation with the Agricultural Adjustment Administration and the State colleges in the Great Plains States. Objectives were to determine (1) the effectiveness of the program in taking unproductive cropland of production; (2) the attitude of farmers toward retirement of land from cultivation; and (3) modifications needed to make the program more effective in the future. Several of the recommendations resulting from the study have been incorporated in the present restoration land program.

LAND CLASSIFICATION

Illustrative of the practical accomplishment of land classifications in planning for land use adjustments is the study in Pine County, Minn. In the eastern part of the county many acres of land were subject to forfeiture to the State for nonpayment of taxes. Attempts to farm land that is not adapted to agriculture, moreover, led to high relief costs and to inefficient expenditures of public funds. The recognition by local people that the use of land for purposes to which it was ill-adapted had given rise to serious problems affecting all groups and prompted a demand for securing general agreement as to specific areas in which various land uses should be encouraged and for agreement as to how adjustments might be accomplished.

In answer to this demand the Bureau provided the means for bringing together various groups affected. After joint discussion of the problems and potential land policies, local residents through committees classified the land as either suited to agriculture or unsuited to this use.

Out of this joint study came a new understanding of the problems and the methods of dealing with them. This led to concrete recommendations for future policies mutually acceptable to all groups. The local committees strongly urged that the county board sell tax-forfeited land only in the districts that are classed as agricultural and requested the State Legislature to grant the county legal authority to guide future settlement into such areas. The county board has officially taken cognizance of the recommendation as to the sales policy for tax-forfeited land, while the legislature passed the necessary enabling legislation to permit rural zoning.

A rather detailed methodology was devised for mapping and land use classification through the joint efforts of Department and college technicians and of farm people. Work outlines and plans for the land use classification phase of the flood-control and water-facilities programs were developed. Experimental research was made in several counties to bring about closer coordination of land use classification methodology with the technical requirements of planning programs. Technical studies were made of map structure and meth-

odology in measuring areas. Assistance was rendered in preparing proposals for land-utilization projects, in appraising these and other land-acquisition proposals, and in selecting sites for land-utilization projects.

Significant was the adoption in the Bureau's county agricultural planning program of the land use-classification scheme based on analysis of both physical and human factors relating to land use in specific areas. This approach not only considers land use problems and requirements of farm people, but it also includes formulation of specific programs attainable through coordinated efforts of State and Federal action agencies. Developed largely from experience in making land use classifications, the approach has already facilitated efforts to coordinate plans and activities in the agricultural program. Continued emphasis will therefore be placed on the development, improvement, and clarification of this approach.

FLOOD CONTROL AND LAND USE ADJUSTMENTS

To carry out the planning phase of land use adjustments, the Bureau cooperated closely in the programs of land acquisition, flood control, and the providing of water facilities. Field personnel selected sites for land-utilization purchase projects, and, in cooperation with the Soil Conservation Service, prepared preliminary project proposals. The Flood Control Section and the Water Utilization Section were assigned responsibility for the planning and research phases of the flood-control and water-facilities programs, respectively. In carrying forward planning phases of economic and institutional adjustments in land use, the Bureau fused its efforts with those of other Federal agencies, State colleges, State and local organizations concerned with land use adjustments, and local farm people. Following the reorganization of the Bureau, these activities were adjusted to meet the demands for technical guidance and assistance in developing the county-planning program.

In the planning phase of the flood-control program, preliminary examinations were completed on 76 watersheds, 42 of them during the year. Preliminary examinations are for the purpose of obtaining certain facts basic to determining whether technically sound and economically feasible programs for run-off and water-flow retardation and soil erosion prevention appear possible of accomplishment. These preliminary examinations led to the undertaking of detailed surveys on 18 watersheds.

In order that the flood-control program of the Department may develop along lines that are both economically and socially sound, the Bureau gave serious consideration to the effects of proposed programs on the welfare of people immediately concerned and on the national welfare. To this end, problems of evaluation were studied and procedures were developed for the accurate appraisal of flood damages, and of the benefits and costs of various flood-control measures and programs. The relationships involved are complex, and although many of the problems are comparatively new, progress toward their solution was made.

During the year, the Department of Agriculture agreed to make gross-area flood-damage and benefit appraisals at the request of the

War Department. Under this agreement, appraisals were made by the Bureau of Agricultural Economics on the Trinity and Brazos watersheds in Texas, Fountain Creek in Colorado, and on the Nooksack, Snohomish, Willapa, and Naselle watersheds in Washington.

The Bureau has technical responsibility for conducting the farm-management phases of watershed flood-control surveys that are being carried on cooperatively with the Soil Conservation Service and the Forest Service. Such phases include (1) a determination of the changes in farm inputs and outputs occasioned by physical adjustments for flood-control and erosion-control purposes, (2) an evaluation of the effect of such physical adjustments, (3) a determination of the most advantageous combination of productive enterprises consistent with recommended soil-conserving systems of farming which have flood-control significance, and (4) the formulation of programs for effective farm and ranch management to effect needed flood-control adjustments.

During the year personnel of the Bureau have been engaged in surveys upon the following watersheds: Coosa River, Ga., Muskingum River, Ohio, Kickapoo River, Wis., St. Francis River, Mo., Trinity River, Tex., Concho River, Tex., Washita River, Okla., Tallahatchie River, Miss., Rio Puerco, N. Mex., Fountain Creek, Colo., Los Angeles River, Calif., and Boise River, Idaho.

In water-facilities planning, 15 special reports were released, and area plans for 6 areas were completed for the guidance of operating agencies in the development of water facilities in various watersheds of the Western States. The water-facilities program has been in operation for only a short time. Accomplishments of the program thus far, however, indicate that the development of water facilities for stock and farmstead supplies, irrigation, ground-water replenishment, etc., are designed effectively to alleviate distress and to help promote a more stable agriculture in the semiarid West.

INFLUENCING THE USE OF LAND

In cooperation with farmers, agricultural experiment stations, and county officials, activities were devoted to analyzing the place of such measures as rural zoning, cooperative grazing legislation, and policies relating to tax-delinquent lands in accomplishing various objectives of a land use program. These social tools with which State and local people, working as a group, may control and protect individuals and the public from unwise land use have proved to be most effective. A study in Yellowstone County, Mont., together with other work in the State, helped in securing the recent enactment of a county land-management act and legislation for the improvement in the functioning of cooperative grazing districts. Similar activities in other States, as well as assistance rendered county planning committees, college research workers, and others, have resulted in a number of worth-while publications.

These studies along with informal advisory activities were contributing factors to the adoption of legislation designed to bring about a better relationship of people to the land in Montana, Minnesota, Indiana, Tennessee, Pennsylvania, North Dakota, and South Dakota.

FARMING AS WAY OF LIFE AND OF LIVELIHOOD

The farm population on January 1 was estimated by the Bureau at approximately 32,000,000 persons. There was a slight increase during the year, and the farm population now is close to the record farm population of 32,077,000 in 1910. Approximately 1,000,000 persons moved off the farms in 1938, whereas about 800,000 moved to farms from towns and cities. The net migration off the farms was more than offset by an excess of births over deaths on farms.

Effort is being made in cooperation with State agricultural experiment stations to improve the annual farm-population estimates, utilizing samples selected in different ways, different types of mailed questionnaires, and follow-up field surveys. Especial attention is being given to techniques that appear to combine the advantages of interviews in carefully selected sample areas with the simplicity and low cost of mail questionnaires.

Studies are being made of migration to and from the farms, of farm labor, of farm standards of living, of the needs for rural relief, of community organization, and related social aspects of farm life.

Studies are being made of rural opinions and attitudes, particularly as they relate to public-action programs. Cultural areas or regions of the Nation are being determined and analyzed.

Fourteen reports have been issued in the Social Research series (processed), two are about ready for publication, one has been published as a research bulletin by the Works Progress Administration, and one by a State experiment station. The large demand for additional copies of the publication, *Disadvantaged Classes in American Agriculture*, made a second edition necessary.

ADJUSTMENT AND THE FARM

A considerable part of the Bureau's work in farm management emphasizes fact finding and planning for agricultural programs. It aims to construct a more adequate factual and analytical foundation of knowledge regarding various farm situations and problems. The Bureau has undertaken to determine the economic problems of internal organization and operation of farms in problem areas and to appraise the relation and effect of various agricultural programs on these problems, as a basis for a better use of the farmers' resources in terms of economic welfare of farm families and of the Nation.

Farm-management research and planning studies in selected intensive counties and in uniform-program counties, were started in eight counties in six States. Plans have been or soon will be completed for similar studies in several more. Regional staffs of the Bureau assisted county planning committees and county planning officials throughout their sections in setting up technical procedures and collecting and interpreting available background data useful to local land use planning groups.

Studies in selected intensive land use planning and unified program counties are designed to supplement County Land Use Planning Outline No. 1, the working guide of county land use planning committees, by: (1) A classification of farms in each adjustment problem area in the county by size, physical and economic resources, tenure, type of farming, and other characteristics that are correlated

with adjustment problems on individual farms; (2) an appraisal of alternative production possibilities from the standpoint of conservation and income expectancy for representative farms in each principal group—in view of general economic conditions, interregional competition, and the welfare of the farm population within the area and in other areas; and (3) an outline of suggested elements of practical action.

LAND TENURE

Research and planning activities in land tenure were developed on a somewhat expanded basis during last year. Particular emphasis was given cooperative work with State agencies seeking to improve landlord-tenant relationships through legislative action and education. Numerous research studies sought to develop basic information regarding land ownership and farm tenancy. Some additional research studies were initiated to meet increasing demands for information to guide both Federal and State programs dealing with farm-tenancy problems.

In Iowa, the State Legislature enacted into law three recommended adjustments: (1) The automatic continuation of all agricultural leases from year to year unless notice of termination is given prior to November 1; (2) the amendment of foreclosure procedure in order to protect the farm operator's tenure situation in years of crop failure or low prices by providing for postponement of the foreclosure action when default is brought about by reason of drought, flood, heat, hail, storm, or other climatic conditions or by reason of the infestation of pests that affect the land in controversy, or when the Governor of the State of Iowa, because of a business depression, by proclamation, shall have declared a state of emergency to exist within the State; (3) the appointment of a farm-tenancy committee to study further the farm-tenancy problem.

This work in Iowa has influenced many landlords to make desirable changes in leasing arrangements with tenants. One large life insurance company, owning many farms in Iowa, changed its practice of automatically terminating leases without notice. Now all leases are continued on an automatic-renewal basis unless notice is given on or before October 1 preceding the date of termination, or unless notice is given before December 1 preceding the date of termination and payment is made to the other party for disturbance.

In Arkansas, technical advice and guidance were supplied State officials in drafting the Land Policy Act relating to the classification of State-owned land and its disposition for the benefit of tenant farmers. Technical assistance was given to local authorities in setting up rules and regulations necessary to put this act into operation.

In Texas, at the request of State legislators and local authorities, technical assistance was given in the development of the Texas farm-tenancy bill which provides for many desirable changes in the present law governing landlord-tenant relations. The bill as drafted was favorably reported out by the agricultural committee of the house but failed to pass. It is believed, however, that the work has paved the way for the enactment of legislation providing for improvement in the present landlord-tenant law. Cooperation toward this end will be continued with local authorities.

Similar cooperative work in land-tenure improvement has been carried out in Oklahoma where a special landlord-tenant relationships department has been organized by the Extension Service to improve the farm-tenancy situation. A detailed analysis was made of the farm-tenancy situation in Oklahoma for publication by the State Agricultural Experiment Station. A study of the legal aspects of landlord-tenant relationships was made. Advice and assistance were given local authorities in Oklahoma in drafting the act passed by the State Legislature providing for the sale of State school lands to tenants.

Studies of the legal aspects of landlord-tenant relations in Texas, Arkansas, Oklahoma, Georgia, and Virginia involved library investigation of the constitutional provisions, statutes, and court decisions relating to landlord-tenant relations, a field survey to determine how existing law affects the day-to-day operations of landlords and tenants, and the development of recommendations for improvements in the existing law. Preliminary reports have been completed for Arkansas and Oklahoma. The library investigational phase of these studies has been completed for Texas, Georgia, Kansas, and Virginia. In Virginia, the field survey work has also been completed.

Numerous research studies were continued for the purpose of maintaining a current analysis of the farm-tenancy situation and to supply basic information to Federal, State, and local agencies engaged in farm-tenure improvement programs. Farmers' Bulletin 1164, *The Farm Lease Contract*, was revised. Reports approved for publication included *Tenure Status and Land Use Patterns in the Corn Belt*, *Arkansas Farm Tenancy Situation*, *Recent Changes in Farm Labor Organization in Three Arkansas Plantation Counties*, and *Oklahoma Farm Tenancy Situation*.

FARM MIGRATION

Since 1930 there has been a reduction in migration from farms and a consequent increase in farm population. This increase has been most marked in the poorer areas—those characterized by meager land resources, low incomes, and noncommercial farming. In some of the areas where commercial farming is most highly developed, including those affected by drought, there was a considerable migration away from farms—large enough to bring about a reduction in farm population in some places. Meanwhile, the high birth rates in some of the poorer farming areas are making themselves felt in correspondingly rapid increases in population. The young-adult age groups, which normally would have contributed the largest proportion of the migrants, showed the greatest increases, resulting in a “piling up” of persons in the productive ages.

The reduced migration from rural areas and the back-to-the-land movement have been important factors in intensifying rural-relief needs. Areas receiving large numbers of migrants in recent years, such as the far West, found the migrants a burden with which existing public agencies were unable to cope adequately.

A Bureau report on rural migration concludes:

Experience indicates that migration offers no general panacea for the problem of rural areas. Unguided migration has not been effective in preventing the need for relief, and planned resettlement must necessarily be on a small scale

in terms of large numbers of poverty-stricken rural people. Rather, a combination of directed migration, reduced birth rates, and improvement of social and economic conditions in general within overpopulated areas seems to offer the soundest approach to solving the long-time problems of widespread need in rural areas.

A comprehensive study is being made of migration and resettlement problems in the Pacific Coast States growing out of the westward movement of distressed rural families from the Great Plains and the Cotton Belt during recent years. It seeks to evaluate the significance of this population movement for public policy and to afford a factual basis for Federal and State programs to aid and direct the resettlement of the displaced migrant group. The study is being made in cooperation with the Farm Security Administration, the agricultural experiment stations of Washington, Oregon, and Idaho, and the department of economics of the University of California. Field work and collection of data were completed at the end of June. Reports on various phases of the project are in preparation for release at intervals during the current fiscal year.

REGIONAL AND AREA ADJUSTMENTS

Studies of area agricultural adjustments were continued in 6 localities of the southern Great Plains. Four were undertaken to determine the minimum sizes and types of units for successful farming. One of these analyzed 100 small ranches to learn the extent to which it will pay small farmers operating under similar conditions in drought areas to go into the production of cattle or sheep.

In the northern Great Plains the farm-adjustment studies in Montana have been continued. The State has been divided into nine major type-of-farming areas presenting some degree of similarity in physical characteristics and farming types, and subsequent work has been centered on an appraisal of present conditions on Montana farms, their future outlook, and the degree of adjustment needed to bring stability and permanence in each of these major areas.

The Bureau cooperated with the South Dakota State College in a study of the present agricultural conditions in central South Dakota and the adjustments needed to place agriculture in the area on a more stable basis.

In the cotton States studies were made in the Yazoo-Mississippi Delta area, in the High Plains cotton area of Texas, and in Alabama and Georgia. The study of plantation organization and operation in the Yazoo-Mississippi Delta, completed during the year, shows that significant changes have been occurring during recent years in the use of labor and power and, consequently, in plantation organization and operation. The economic and social significance of these changes is analyzed and a foundation of information is developed upon which effective adjustments may be based.

Studies in the Northeastern and East Central States likewise have contributed to the fund of knowledge upon which permanent agricultural programs may be based. These projects dealt with tobacco farms in Virginia, truck farms in New Jersey, and dairy farming in Maine, Massachusetts, Connecticut, and Rhode Island.

Type-of-farming studies were made in Mississippi, Alabama, New Mexico, and Maryland.

To measure the physical and economic effects of the soil conservation program on the organization and operation of farms, 47 studies were under way in 17 States during the year. In these projects the Bureau cooperated with the Soil Conservation Service and the agricultural experiment stations in the States.

Range studies were conducted on three major fronts: In northeastern Nevada the cooperative economic study of range use was continued in order to work out the most feasible program for use of the natural resources of the area, and to develop an administrative program for the various Federal agencies involved. The study gives an accurate inventory of agricultural resources in the area, and an analysis of economic and physical forces affecting ranch operation and income. Information developed is of value to administrative agencies such as the Forest Service and the Division of Grazing and the Office of Indian Affairs of the Department of the Interior in developing an improved basis for the administration of public lands.

Farm-management work was nearly completed on the Perkins County, S. Dak., and the Tri-State (Texas, Oklahoma, and New Mexico) land-purchase projects. Studies were made in these areas to ascertain the sizes and types of farm units, and the farming practices, most likely to withstand drought periods, and adequately support a family; also to develop general guidance principles for adjustments in use of land for grazing on the projects. Studies were completed in Baca and Las Animas Counties, Colo. Soil-productivity indexes were prepared for eastern Colorado, western Kansas, and the Oklahoma Panhandle to serve as a guide for the land-purchase and other programs.

FACTORS IN RURAL LIVING

Studies in standards of living generally indicate that one of the most practical methods of raising the level of living of farm families is through the greater production of goods for home use. The families with the smallest cash income—total or per capita—also reported the smallest quantity of home-produced goods and as incomes increased the value of home-produced goods also increased. Increased cash incomes resulted in greater expenditures for health, education, and other so-called advancement expenditures, which are also the ones most likely to be curtailed as cash incomes are decreased.

Effort is being made to develop indices of standards of living to be based on a small number of relatively simple items, the data for which might be obtained currently at small expense.

Twenty-five thousand usable reports relative to the extent of combine use, binder use, and other methods of harvesting wheat and oats, and the custom rates for combining and threshing, were received by the Bureau in response to a questionnaire sent to crop reporters. Data were obtained on the extent of use of the mechanical corn picker and custom rates for its use. Analysis of this information is still under way.

A study of the effect of use of tractors on farm-organization and farm-management problems recently was undertaken in five type-of-farming areas in Minnesota. Studies were completed on machine duty and crop-production practices on approximately 2,400 grain

farms in the major wheat areas of the Great Plains and the Pacific Northwest.

In several studies designed to develop an improved basis for rehabilitating and resettling farmers so they can make a living and pay for their farms, the Bureau cooperated with Federal and State agencies. These studies related to rehabilitation clients of the Farm Security Administration in Minnesota; to settlement of farmers on the newly developed Vale and Owyhee irrigation projects in Oregon, and to a proposed irrigation project in Jackson and Greer Counties, Okla.; to settlers on cut-over lands in western Washington; and to possibilities for rehabilitating farmers in the Great Plains region.

AGRICULTURAL HISTORY

Special interest has been shown during the year in the historical background of the Nation's agricultural problems. A committee of historians from different sections of the country met in Washington May 22-24 and recommended an expansion of the agricultural history unit as well as the historical activities of the agricultural colleges and experiment stations. It is planned to carry out this recommendation. Progress has been made in the research on the development of dairying in the Northwest, with a view to supplying a sample monograph of what is needed for all commodities and regions.

The following historical bibliographies were issued or reissued during the year: References on American Colonial Agriculture, References on Agriculture in the Life of the Nation, Selected References on the History of Agriculture in the United States, List of American Economic Histories, References on the Significance of the Frontier in American History, and References on the History of American Agriculture. New and enlarged editions of the bibliographies called References on Agricultural Museums, and Selected References on the History of English Agriculture have been prepared for publication.

FARMERS IN A YEAR OF ABUNDANCE

Nineteen thirty-nine is another year of abundance of food, feed, and fibers. Total crop production was smaller this year than last, but only slightly below the predrought average. The supply—production plus carry-over—is more than enough for normal domestic requirements and prospective sales abroad. Most areas except the drought-stricken sections of the Northeast, Nebraska, Kansas, and parts of the Southwest, have had good yields of crops this year. As this report is written more than 12,000,000 farm-family workers and hired hands are harvesting fall crops.

Livestock production was larger this year than last, and was approximately at the levels of predrought years. In terms of food supply, the increase more than offset the smaller yields of crops. Each animal unit produced more, and there were more livestock on farms. Products include meats, lard, wool, eggs, milk, butter, cheese—all in plentiful supply at relatively low prices. Livestock production has been increased during recent years as feed became more plentiful and low priced, following the droughts of 1934 and 1936.

The financial results of the year's production of crops and livestock products are summed up in this Bureau's estimates that 1939 cash farm income (including income from marketings, Government loans on farm commodities, and Government conservation and parity payments) will total about \$8,300,000,000. This compares with about \$8,100,000,000 in 1938, and with \$9,100,000,000 in 1937—the peak of the recovery period. The depression low was \$4,682,000,000 in 1932. The 1939 income will be about 80 percent larger than in 1932.

The estimates for the various items will be summarized, and the Bureau expects to publish a revised series of estimates of gross and cash are fractionally lower this year than last, the purchasing power of farm income was slightly larger than a year ago. Nevertheless, prices of commodities bought by farmers continue approximately 20 percent above pre-war prices, whereas prices received by farmers are 10 percent below pre-war prices.

ESTIMATING FARM INCOME

Estimating farm income is a major research project. The Agricultural Adjustment Act of 1938 requires a comparison of per capita net income of individuals on farms from farming operations with per capita net income of individuals not on farms. This required an intensive study of the basic data used in estimating farm income and expenditures. Revisions of former series were needed to provide a measure of income parity. During the year, the Bureau has published income estimates for the period from 1910 to date on most of the principal farm products.

The estimates for the various items will be summarized, and the Bureau expects to publish a revised series of estimates of gross and cash income from agriculture in the United States from 1910 to date, on the calendar-year basis. Estimates of farmers' expenditures for fertilizer and feed, and other commodities used in production, cost of hired farm labor, depreciation and value of farm buildings, and purchases and depreciation and value of automobiles, motor-trucks, tractors, and other farm machinery, estimates of medical service rates to farmers, rates for electricity for farm home and farm power, telephone rates to farmers, rural passenger fares, and prices of tobacco products, prices of newspapers, and rates for hired household help, theater admissions, and barbers' services are some of the statistical series that have been completed for this project.

Additional research work has been done in combining the various reports on nonfarm sources of income of farmers and in estimating the national income of persons not on farms back to 1909. Because of the lack of a comparable series of data on national income since 1909 and the various concepts of income used in income studies, much research work is involved in making these estimates comparable over the entire period and in adjusting the concept of national income to coincide with that of the estimates of income from agriculture. A general revision of index numbers of prices received by farmers has been practically completed.

The Bureau continued its annual inquiry into the cost of producing corn, wheat, oats, and cotton. Studies of farm returns were continued. The Bureau explored the possibilities of constructing

index numbers to show changes in farmers' costs and returns. A special report on Production Costs and Returns, dealt with: (1) Public and private interest in farm production costs, (2) cost objectives, (3) methods and problems of computing costs, (4) three types of cost-price relationships, and (5) costs as a basis for price fixing. The last-named section discussed considerations in determining a "fair" cost-price relationship, the influence of price if set at different cost levels, the relationship between costs and profits, and historical costs as a basis for price fixing.

FARM VALUES AND MORTGAGE DEBT

Other indices of agricultural economic welfare include the maintenance of farm real-estate values at approximately the recovery levels of recent years. As of March 1, the Bureau's index of farm real-estate values was 84 percent of the 1912-14 period. This was a decrease of about 1 point from the 1938 figures, but it was the first decline in 6 years, values having increased about 4 percent each year from 1933 to 1938. The rise in values during recent years seems conservative in view of the much larger gains in farm incomes.

The farm-mortgage debt has declined moderately in recent years and now is approximately \$7,000,000,000. This represents a decrease of more than \$2,500,000,000 during the current decade. About 40 percent of the farm-mortgage debt is held by Government or Government-sponsored agencies, the remainder by insurance companies, commercial banks, and other private agencies. Figures show a reduction of nearly 27 percent in mortgage debt since 1930, but a much larger decrease in annual interest charges. Foreclosures and related distress transfers on mortgaged farms continue an important cause of debt reduction, but voluntary repayments have been of increasing importance in recent years.

Besides annual surveys of farm-mortgage debt, the Bureau is compiling estimates of outstanding farm-mortgage debt and average interest rates, by States, for each year back to 1910. Previous mortgage-debt estimates at census years are being revised to take account of new information obtained in the 1935 cooperative farm-mortgage survey and in the farm-mortgage and transfer project of the Works Progress Administration. Estimates are being made of outstanding farm-mortgage debt for intercensal years and estimates of average interest rates for all years based on W. P. A. project data.

A series of State releases based on the W. P. A. farm-mortgage and transfer project was completed. These present annual data by lending agencies (1917-35) on (1) the percentage of mortgages filed by the principal lender groups, (2) the average size of newly recorded mortgages, and (3) average interest rates on newly recorded mortgages. The State reports are being consolidated into regional and national totals, and indices are being prepared on the volume of mortgage recordings. These series will be available during the 1940 fiscal year. There was a slight decline during 1937 in holdings of farm real estate by leading lending agencies following the continuous increase in such holdings after 1929.

Exploratory work has been begun in a study of the farm-mortgage-credit characteristics of selected types of farming areas. Survey data compiled by the Bureau and data from the W. P. A. farm-mortgage and

transfer project have been analyzed to aid in the isolation of the characteristics of farm-mortgage financing peculiar to certain types of farming areas. Such an analysis of relatively homogeneous areas makes possible a better appraisal of farm-mortgage problems than can be accomplished on the basis of data for States and geographic divisions.

An analysis was made of the census data on the percentage of owner-operated farms mortgaged as shown in the several census reports, and estimates by States of the percentage of such farms under mortgage were made for each census year from 1890 to date. Analysis was made of the data on frequency of mortgage debt obtained in the 1935 cooperative survey to determine the proportion of full-owner operators owning land in addition to that operated by them. It is estimated that about 15 percent of the full-owner operators own additional land which they rent to others, that in 1935 about 33 percent of these farm owners had mortgage debt as compared with 40.7 percent of those who owned no additional land.

SHORT-TERM CREDIT

Farmers' short-term debts on account of personal and collateral loans by commercial banks and loans of a similar type held by federally sponsored credit agencies totaled \$1,255,185,000 as of December 31, 1938. Loans to farmers by commercial banks increased during the last half of the year; loans by federally sponsored credit agencies declined. The combined holdings of the two groups of lending agencies were 28 percent higher than at the end of 1937. The increase in 1938 reflected in part the substantial volume of advances made by commercial banks under the Commodity Credit Corporation loan program.

The Bureau is trying to find ways in which country banks may serve more satisfactorily as agricultural credit institutions, and to find ways to lessen the problem of idle capital in agricultural districts. A study of country banks in Wisconsin was completed during the year, and work is well advanced on a similar study in Utah. The Wisconsin survey indicated possibilities of country banks increasing protection to depositors and providing more dependable credit services to local borrowers. There seems to be urgent need for a modification of obligations of country banks to time and savings depositors, so that these banks may be relieved of responsibility to pay such depositors on demand or at short notice. Much improvement can be made also by altering bank policies with regard to investments in securities.

Demand deposits of country banks afford a sensitive index of changes in farm-purchasing power. In the last half of 1938, such deposits in seven Corn Belt States and in eight range States reached the highest level of the recovery period. Personal and collateral loans to farmers by insured commercial banks increased during 1937 and 1938, the total rising from \$593,614,000 on December 31, 1936, to \$1,064,667,000 at the end of 1938. Short-term agricultural loans of a similar character by federally sponsored agencies rose during 1937 from \$170,271,000 at the end of 1936 to \$192,480,000 at the end of 1937. By the end of 1938, such loans had fallen to \$190,518,000.

Projects now being developed by the Bureau are designed to determine the debt adjustments and modifications of credit policy needed

to help farmers—particularly in distressed areas—to adopt soil-improvement practices and adjust their production systems. It is hoped, also, that through participation in the program of county planning, farmers may be encouraged to plan their use of credit more carefully so as to avoid unprofitable borrowing and excessive indebtedness.

FARM TAXES AND LOCAL GOVERNMENT

Farm real-estate tax levies rose slightly from 1934 to 1937. The 1938 levies were approximately equal to those of 1937, and preliminary indications are that those of 1939 will be on about the same level. The 1938 levies averaged 186 percent of the 1909–13 base, as compared with 187 percent in 1937, 178 percent in 1934, and 281 percent in 1929. In relation to gross farm income, taxes fell from 1932 to 1937. The comparison of real-estate taxes and farm income must be interpreted with caution, however, because it omits a vital factor—the increase in other taxes, such as automobile and fuel and general-sales taxes.

Several factors operated to make possible the slackened rate of increase in farm real-estate taxes during the decade of the 1920's and the decline during the period 1929–34. Local and State governments were increasing their debt much faster during the 1920's than during the preceding decade. Federal aids for schools and roads were increasing. State aids financed from other sources than property taxes were increasingly supporting local services. Between 1920 and 1934 these sales and license taxes built up an annual charge against farmers of perhaps 150 million dollars, while farm real-estate taxes decreased by about 100 millions. It thus becomes apparent that real-estate taxes no longer constitute the preponderant part of the farmers' tax problem. Other factors in the situation need analysis. As one phase of the analysis, historical series of farmers' annual payments in each major type of tax are being developed.

A recent development in real-estate taxation of importance to farmers is homestead tax preference. Since 1933 it has been put into operation in 13 States, and its significance is the subject of extensive debate. Theoretical analysis must follow the peculiarities of specific laws, and final interpretation must wait for the adjustments in administration and taxpayer attitudes to take place.

Farm real-estate-tax delinquency has decreased since the depth of the depression but its effects will probably continue for a long time. The critical fiscal situation that delinquency developed in many rural jurisdictions during the depression called attention to fundamental maladjustments in the governments and economy of rural communities. There is some danger still that planning for stabilization of local resources and income will accept tax delinquency too largely as a causal factor in the problem, that it will rely too largely on delinquency as a criterion of appropriate or inappropriate use, ownership, organization, and public-control policies. Like other elements in the farmers' tax situation, this subject needs further analysis and exposition.

Important area studies are being conducted in the field of local government and finance. In agricultural areas, farm property comprises the principal source of rural taxable values, and changes in relationship between the people and land resources involve changes

in needs for public services, the type of local organization to supply these services, and the amount, kind, and distribution of fiscal resources that may be drawn upon to support them. Changes in intensity of land use and changes in settlement, as in the case of shifts from a dry-farming to a grazing economy, mean drastic revisions in tax base and in costs and location of such public services as schools and roads, and in the kind of districts to supply them.

A number of specific county analyses in areas of major land use problems were completed. These dealt with such specific matters as (1) reorganization plans for county government, (2) development of programs for use and disposal of tax-reverted lands, (3) utilization of tax-deed lands by grazing associations in areas where an adjustment from dry farming to ranching is occurring, (4) effects of public land-purchase and flood-control programs upon local government revenues and services, and (5) revision of assessments on lands used for grazing and suited only for that purpose.

Analysis was made of specific effects of the Federal land-purchase program upon local government. The findings are being used by a Departmental committee to formulate a uniform policy regarding contribution to local government for tax loss on all federally-owned lands administered by the Department. Members of Congress, local officials, and the branches of the Department concerned have expressed interest in more equitable adjustment of the problem.

In southeastern Colorado, a tax-assessment survey was made relating assessments to current productive value by land classification. One county actually reassessed along these lines, correcting a situation in which land used and suited only for grazing was long seriously over-taxed as farm land. The tax commission became interested and further work is planned in that State and in neighboring range States. Readjustments in assessments on range land have considerable significance in promoting land-use adjustment.

In Billings County, N. Dak., the county commissioners petitioned for a survey of the interaction of local finances, land use, and the land-purchase program in the county. Serious fiscal difficulties arising from the land problem prompted the request. Concurrently with the survey, representatives of the Bureau collaborated in the drafting of important State legislation, which was passed, enabling reorganization of county government. The findings of the survey are now being used for local discussion and action. Further work is in demand in North Dakota, Missouri, and other States where county planning groups offer the medium for purposive discussion and adoption of practical solutions for serious fiscal and governmental organization conditions related to land-use problems.

In Yellowstone County, Mont., a survey of the Buffalo Creek grazing district was made in cooperation with the State college, the county planning committee, and members of the cooperative grazing association. It presented the interrelationships of grazing associations, rural zoning, public-land purchase, the agricultural-adjustment program, and the management of tax-reverted county lands. The operation of the grazing association as a device for land-use adjustment in the Great Plains was analyzed. Detailed recommendations resulted for grazing legislation and association procedure, rural zoning, tax adjustments, modification of the agricultural-conservation pro-

gram, and management of tax-reverted lands. This ground work has already led, among other movements, to introduction of bills for administration of county tax-deed lands in Montana, North Dakota, and South Dakota.

In administration of the Bankhead-Black Act, 1,550 agreements were concluded with local taxing districts whereby payments in lieu of taxes would be made on extensive tax-exempt property holdings of the Farm Security Administration. New administrative procedures were developed and State legislation was obtained to assist efficient administration of the act. In addition to valuation of extensive resettlement-project properties for purposes of making the payments, practical problems involving applied research were solved. These included formation of new school districts, incorporation of villages and towns, and provision of public services and facilities to new aggregations of settlement by these and existing local units.

A departmental committee continued deliberations on a uniform plan of contribution to local governments because of tax exemption of land acquired and administered by various agencies of the Department. Problems arising from the extensive public-land purchase under the land-utilization program and needed changes in Forest Service provisions on this subject prompted the consideration of such a plan. Detailed factual surveys on various land-utilization projects, showing effects of the public-purchase program upon local government finances and services were of material assistance in the work of the committee.

During the year the Bureau has directed effort so far as possible toward (1) annual estimates, 1924 to date, of all major taxes paid by farmers or farm business, (2) better understanding of recent movements in taxation as they affect farmers, (3) study of individual problem areas with a view to recommending local government and taxation modifications in line with the national program for improved land use and stabilization of rural communities, (4) further development of policy regarding payments in lieu of taxes on extensive tax-exempt holdings of Federal agencies, and (5) presenting in articles and otherwise the questions regarding such aspects of the farmer's interest as discussion of public finance often seems to overlook.

FACT-FINDING FOR THE PEOPLE AND THEIR GOVERNMENT

Public and private agencies continually ask the Bureau to make statistical and economic studies dealing with many current agricultural problems. Activities during the year included a survey (at the request of the dairy statistics committee of the Northwestern Dairy Conference) of dairy-statistics work by public agencies of the Northwest. Results of this survey and suggestions for improving the dairy-statistics program were included in a report to the committee.

A report was published on world production and international trade in butter and cheese, and a manuscript for a technical bulletin was completed on the production and consumption of manufactured dairy products. A report of a joint project with the New York State College of Agriculture on the demand for milk, cream, and evaporated milk in the New York City market showed that although prices of milk and cream on retail routes were uniform and rather stable, retail

prices in stores were variable and were lowest in low-income areas and highest in high-income areas.

Other studies dealt with the tendency of production of protein by-product feeds to increase in relation to the production of feed grains, the effects of oleomargarine taxes on the consumption of oleomargarine and butter, the increase in consumption of evaporated milk in relation to consumption of fresh milk and cream, and the per capita consumption of manufactured dairy products. (In 1938, the per capita production of manufactured dairy products was the highest in more than 40 years.)

A mimeographed publication, *State and Federal Legislation Relating to Oleomargarine*, issued in June 1936, was brought to date and reissued. It outlines the historical background of margarine legislation, summarizes the State and Federal laws and regulations respecting margarine, and analyzes some effects of State legislation. It showed that the number of retail dealers of margarine had declined on the average by 51 percent in States enacting a 5-cent excise tax on the production, by 91 percent in States enacting a 10-cent tax, and by 99.8 percent in States enacting a 15-cent tax. The consumption of oleomargarine in the States affected has been considerably reduced by the enactment of State taxes in recent years.

DEMAND FOR STATISTICS

The unsettled and rapidly changing domestic and foreign economic situation of the last decade has brought a steadily increasing demand for statistical information and statistical and economic analyses of agricultural problems. The Bureau has organized a central statistics service which brings together all statistics relating to agriculture, so that anyone not entirely familiar with sources of such data may obtain from one agency the best and most complete obtainable information. The aim of this service is to make readily available all statistical information relating to agriculture for the use of research workers, administrators, legislators, and the general public.

During the year the Bureau was called upon to furnish many special analyses of current problems for the use of Government administrative officers, Members of Congress, farm organizations, agricultural businessmen, and others. These analyses have included the effects of actual and proposed legislative measures and administrative policies, tariff problems, and the effects of changes in domestic and foreign-demand conditions in relation to changes in prices and incomes received by farmers. Many special commodity analyses were furnished. The regular series of monthly situation reports, of which 12 were issued each month covering the several commodities and the general price situation, also contributed to keeping administrators, legislators, and the public abreast of the rapidly changing current economic situation affecting agriculture.

CROP INSURANCE

Wheat growers were insured this year against unavoidable hazards affecting crop yields. Using actuarial bases developed by the Bureau, the Federal Crop Insurance Corporation wrote more than 163,000

policies in 1,289 counties in 31 States. Premiums of about 7,000,000 bushels of wheat were collected to insure the production of about 70,000,000 bushels. The Bureau is studying current problems in connection with the wheat-crop-insurance program, to determine the effect of improved farming practices on insurance rules, the extent and cause of wheat-crop losses, whether the actuarial basis is satisfactory and equitable, how to broaden the actuarial base period as additional yield data become available, and the economic and social results of crop insurance.

The Federal Crop Insurance Act provides for research to determine the feasibility of extending the benefits of crop insurance to producers of other crops. A plan for insuring cotton crops has been developed by the Bureau and published in outline—A Suggested Plan for Cotton-crop Insurance—as House Document No. 277, Seventy-sixth Congress, first session. Basic features are similar to the wheat-insurance plan in that the cotton farmer would be offered protection against losses in yield due to unavoidable causes. Premiums and indemnities would be determined in lint cotton and payable in cotton or the cash equivalent. Reserves accumulated out of premiums would be carried in cotton.

County cotton-loss experience figures are being determined on the basis of average loss experience on sample farms during a representative period of years. Research to determine these county average loss-experience figures, based upon yield data for sample farms supplied by State and county offices of the Agricultural Adjustment Administration, has been completed for more than 950 cotton-growing counties. Further work is necessary, however, in checking and testing the data, and in adjusting figures to reflect the experience during a more representative period, probably the years 1928–38. Crop-loss experiences indicate that premiums in some counties may average as high as 25 pounds of cotton per acre, in others as low as 5 pounds—for insurance up to 75 percent of the average yield.

An important feature of the plan for cotton-crop insurance is the provision for insurance against losses in yield of cottonseed as well as lint cotton. It was recommended in the proposed plan that all premiums and indemnities for loss of lint cotton be increased by a percentage which on the average, over a period of years, reflects the proportion that cottonseed represents of the lint-cotton returns. This provision would offer protection against losses of cottonseed as well as lint losses by the use of actuarial data which are available only in terms of lint. (At the time this report was prepared the Senate had passed legislation to extend the crop-insurance program to include cotton as well as wheat.)

Research work has been continued on crop insurance for corn and certain fruits. Annual corn-yield data for sample farms in a few representative counties in the Corn Belt were obtained by a field survey, and computations made of yields and necessary premium rates for these counties. Further study was made of similar data covering more than 100 counties, by a mailed questionnaire in 1936. Early indications are that average county premiums might range from 1 bushel per acre in some areas to 3½ bushels in others. A plan for corn-crop insurance will be developed as additional data become available.

FOOD-STAMP PLAN

Several possible marketing devices that might be used either to make agricultural surpluses available to low-income families at reduced prices, or which would give these families an increased purchasing power for foods have been studied by the Bureau. The food-stamp plan, now being operated on an experimental basis by the Federal Surplus Commodities Corporation, is one outgrowth of these studies. This plan gives to certain low-income groups an increased purchasing power for foods and an incentive to use the additional purchasing power to increase their purchases of surplus commodities.

The Bureau is now making a study of the economic and social effects of the food-stamp plan. It is continuing to study several other possible marketing devices which might be used to move surplus foods or other surplus farm products. The objective is to find practical, efficient, and inexpensive methods of dealing with farm surpluses in ways that will be effective in raising farmers' incomes and benefit the general public through improving nutrition and health.

FLAXSEED AND THE TARIFF

A study of flaxseed prices and the tariff was made in response to Senate Resolution 167, Seventy-sixth Congress, first session, and published as Senate Document No. 62. The primary purpose was to ascertain why flaxseed prices have been below parity since 1920. The study showed: (1) That world production of flaxseed and feeds was greater in the post-war than in the pre-war period; (2) that the use of oils other than linseed oil in paints, varnishes, and linoleum had increased; (3) that the margin between farm and retail prices of farm products was widened as a result of processing and transportation costs during and immediately following the World War; and (4) that there was no significant increase in the world demand for drying oils in the post-war period compared with the pre-war period.

It was found that prices of flaxseed in the United States have been higher than they would have been otherwise, because of the increases in the tariff on flaxseed in 1921, 1922, 1929, and 1930. Since 1930 the tariff on flaxseed, after allowing for the effect of the tariff drawback on exports of products manufactured from imported seed, was about 90-percent effective in raising flaxseed prices in the United States; 10-percent effective in lowering flaxseed prices in other countries.

Other research included studies of the incidence of the processing tax on coconut oil, the effect of imports of cashew nuts on the production and price of domestic nuts, and the effect of removing the duty on hairy vetch seed.

Material was prepared for use at congressional hearings on proposed legislation for increasing taxes on imported fats and oils. The analysis indicated that, although the price of domestically produced cottonseed oil, soybean oil, tallow, and grease, would be increased somewhat as a result of the proposed increase in the taxes on imported oils, the amount of this increase would be materially less than the increase in tax. The price of lard would be affected even less, and that of butter would be affected scarcely at all.

SUGAR, CITRUS FRUIT, AND COTTON STUDIES

Primary factors affecting the consumption of sugar in the United States were analyzed. It was indicated that annual total consumption is closely associated with the average wholesale price of refined sugar and the level of income of industrial workers. Results of this study were used extensively as an aid in determining the annual sugar-marketing quotas under the Sugar Act of 1937.

A special report on the world citrus situation was prepared at the request of the citrus producers in the United States. It revealed widespread expansion in production of oranges and grapefruit in the last two decades, and indicated prospects for continuing expansion in the next 5 to 10 years. Production of citrus fruits has increased most in the United States, Brazil, Palestine, Japan, and the Union of South Africa. It is expected that exports of oranges and grapefruit from Palestine and the Union of South Africa will increase sharply during the next few years. This means increasing competition with United States citrus fruits in foreign markets.

A study of Japanese uses of American cotton and foreign uses in general of American cotton during the last few years showed that from 1903 through 1933, there was a net increase of 1,700,000 bales in consumption of American cotton by Japanese mills, an increase of nearly fourteenfold, and the equivalent of an average annual increase of nearly 60,000 bales. This increase resulted in part from the expansion in Japanese industry and in part from an increased proportion of American cotton used.

Since 1933, consumption of American cotton has declined in Japan 1,000,000 bales, or 50 percent. From 1933 through 1937, a decline of about 500,000 bales occurred, despite an increase of nearly 1,000,000 bales in consumption of all cotton, and American declined from 63 to 35 percent of the total. Changes in relative supplies of American and foreign commodities appear to be the important factor in the situation during this period.

Japanese consumption of American cotton declined an additional 500,000 bales during the last 2 years. This decline appears to have been due largely to the Sino-Japanese conflict which brought Japanese allotments of foreign exchange, restrictions on the use of cotton by Japanese consumers, and increased imports of the goods that are considered more essential for military needs.

A study of the effects of currency depreciation in the United States and in foreign countries on cotton price and on acreage in these countries indicated:

(1) Currency depreciation in the United States and the important foreign countries which were studied no doubt caused the price of cotton in those countries to be higher than it would have been had the currency not been depreciated.

(2) The extent of the depreciation of the currency of a given country, the number and importance of other countries whose currency was depreciated at approximately the same time, the extent of the depreciation of the currency of cotton countries, and the importance of the country as a consumer of cotton are the important factors determining the extent to which currency depreciation affects cotton prices in any given country.

(3) The effects on cotton acreage differed from country to country, not only because of differences in the effects on cotton prices, but also because of the extent to which the prices of alternative products were affected and the extent to which producers responded to price changes. In Egypt and southern Brazil, grain and coffee prices respectively are important factors affecting cotton acreage.

(4) In the United States, it seems probable that the cotton-adjustment program prevented the increase in domestic cotton prices (resulting from depreciation of the dollar) from increasing cotton acreage to any significant extent.

STUDIES OF PRICE FIXING

An analysis was made of the probable cost of carrying out the provisions of a bill providing for price fixing applied to domestically consumed farm products. The total cash outlay by the Government in administering the provisions of the bill, it was found would be prohibitive and tremendous difficulties would be encountered in attempting to put the bill into operation.

An analysis was made of the activities of the Federal Government in aid of agriculture bordering on price fixing during the period 1933-38. It was found that only a few such measures might be termed price fixing, as clearly defined, but that several have had features bearing an outward resemblance to it, or in actual operation have had effects similar in some respects to those of outright price-fixing measures. Such measures in aid of agriculture were found in connection with tobacco, dairy products, peanuts, rice, sugar, and other commodities.

Analyses were made of various export-dumping plans, and of the effects of the wheat-export subsidy, and probable effects of the cotton-export subsidy upon prices and incomes received by producers of these commodities and upon world prices. It was found that the wheat-export subsidy has operated mainly to increase domestic prices rather than to lower world prices. The Bureau contributed extensively to a report on tobacco exports prepared in response to Senate Resolution 291 and published as Senate Document No. 39, Seventy-sixth Congress, first session.

FOREIGN TRADE IN MEATS

A study of trends in foreign trade in meats and livestock and of their relation to trends in domestic meat and livestock production was practically completed during 1938-39. This study indicates that one of the most important problems confronting livestock producers is the finding of foreign outlets for 500 to 600 million pounds of lard every year, approximately 25 percent of our lard output, or making adjustments in hog production which will result in the production of less lard. For a long period of years before the 1934 drought, domestic production of lard exceeded domestic consumption by a considerable margin and from 25 to 35 percent of our lard production was exported. Nearly one-third, or about 200 million pounds of the total United States exports usually went to Germany. Since 1933, Germany has taken practically no American lard, and it does not appear probable that it will take any in the next few years.

With prospects for a recovery in hog and lard production to pre-drought levels in 1940 and with little likelihood that foreign markets will take nearly so much lard as before 1934, it appears probable that the domestic market will have to absorb a much larger-than-average quantity of lard. The situation is further complicated by the fact that the domestic production of edible vegetable oils that compete with lard is now from 300 to 400 million pounds larger than before the drought. Most of this increase is in soybean oil. Consequently, the domestic supply of lard in the next few years will be in excess of the

usual domestic-consumption requirements and probable export outlets by about 200 million pounds and, in addition, the volume of domestic vegetable oils used for essentially the same purpose as lard will be 300 to 400 million pounds greater than in the decade before the drought. Although the increase in population during the last 10 years will offset in part the increase in total output of lard and vegetable oils since the predrought period, per capita supplies of these products in 1940 will be much larger than they were previously. The increase in lard this year and the prospective larger domestic output of lard and other fats and oils next year have already been reflected in a marked decline in the price of lard.

From a long-time standpoint, the situation for pork and other meats is much more favorable than for lard. Exports of pork, although relatively large for many years, were never so large in relation to the domestic production of pork as in the case of lard. Although prospects for recovery in the foreign demand for pork to anything like the levels of the 1920's are very unfavorable, the increase in population will make it possible for the domestic market to absorb a larger quantity of pork than before 1930.

The situation for all meats is much the same as for pork. The ratio of meat production to population has been declining for more than 30 years. Per capita meat consumption, however, has not declined so much as per capita meat production because exports of meats were decreasing in most of this period. During the last few years, meat exports have been small and have been about offset by meat imports. Some further increase in population seems probable during the next several decades, and unless meat production increases, the per capita production of meats may decrease further. But the trend in meat production may be upward in the next decade because of the shifts in acreage of cash crops, especially cotton, to feed crops and pasture. This increase will probably be no greater and may be less than the increase in population in the next 10 years.

FROM FARMER TO CONSUMER

The Bureau has instituted a stronger and revitalized program of research dealing with the marketing and transportation of farm products. The importance of this research is obvious. The total money spent each year for the services of transporting and marketing agricultural products is greater than the total income received by farmers. The farmer gets for his work less than half the money spent by consumers of foods and other commodities made from farm products.

Policies of the Federal and State governments should promote and encourage an efficient and effective marketing system. Any substantial improvements in this direction would be of great benefit both to the farmers and to the consuming public. But this requires more than the usual detailed and technical marketing studies. It requires a rather general evaluation of the marketing system as a whole and a broad consideration of the economic and social effects of alternative policies in marketing and transportation.

Marketing programs and policies of the Federal, State, and municipal governments are being studied. The economic and social effects of the policies being followed in providing governmental marketing

services and in regulating marketing methods and practices are being evaluated in the hope of contributing to the development of a program intended to provide for more efficient marketing and to benefit both the farmers and the consuming public. The marketing work of governmental agencies includes three general fields: (1) Services such as market news, standards, and inspection; (2) the participation of the Government in action programs intended to dispose of farm surpluses and in general to provide for more orderly marketing; and (3) regulation, such as the enforcement of the Commodity Exchange Act and the various State and municipal regulations dealing with such matters as milk inspection.

American agriculture traditionally has taken active and widespread interest in the economic problems of transportation. With production of many farm products in specialized areas and consumption of these products concentrated in the populous East, the frequently great distances from farm to market constitute significant economic barriers to the marketing of farm products advantageously from the standpoint of farmers and consumers. Farmers must have at their disposal transport services that are efficient and adequate in terms of speed, protective qualities, and the necessary quantities of particular services at rates that are low enough to enable farm products to move to markets and thence into the channels of consumption without delay and the piling up of agricultural surpluses.

A development in line with the long history of farmer agitation for more adequate and more economical transportation service from farm to market was the establishment in the Department of Agriculture in 1938 of general economic research into the basic problems of transporting farm products. The general objectives of this program include assembling relevant facts regarding rates and practices applying to the transportation of farm products and the factors influencing movements in freight rates; studying the economic effects of transportation rates and practices upon farm production, prices, and income; appraising the implications of technological changes affecting the transportation of farm products, such as the development of trucking; and considering public policies with respect to promotion and regulation of transportation with a view of suggesting policies that will reduce the economic barrier of distance between farm and market and promote higher levels of farm income and general employment, production, and consumption.

This transportation program was authorized by Congress in section 201, title II, of the Agricultural Adjustment Act of 1938, which provides authority for the Secretary to enter cases before the Interstate Commerce Commission involving rates, charges, tariffs, and practices relating to the transportation of farm products, and to assist farm cooperatives in making complaint to the Commission with respect to such cases. These functions were assigned to the Bureau of Agricultural Economics to administer for the Secretary.

The approximately 600 million dollars of revenue that the steam railroads of the United States derived from transporting agricultural commodities in 1937 and the large, though undetermined, sums received by express companies, water lines, and motor carriers for transporting farm products and supplies explain the great concern of agricultural shippers in the formulation of national transport

policies and in fluctuations of freight rates. This concern reached a high pitch during the last 2 years because of the recent general increase of 5 percent in rail rates on agricultural products and further increases on specific farm products such as livestock and cotton.

TRENDS OF MARKETING

Costs of marketing have increased over a period of years, leaving smaller proportions of the consumer's dollar for the farmer. What is the cause of this trend? Is it necessary? In recent years large-scale business enterprises—chain stores, meat-packing plants, and large dairy companies—have been handling a larger proportion of the farm products, often receiving these products direct from producers. Is this an efficient method of distribution? Will it continue? Will it result in monopoly? If so, should the monopoly be broken up or regulated?

Export markets for many of our products have been declining. Cotton exports are the smallest in 50 years. What is the cause of this trend? Can it be counteracted, or must production be adapted to new conditions? Farm products formerly moved to market largely by rail. Ever-increasing quantities are now moving by motortruck. How important is this trend and what adjustments are necessary to adapt ourselves to it?

The above questions indicate the types of studies that are necessary in order to find out where we are headed in our production and marketing of farm products, and to adapt ourselves to the constant changes that are taking place either by taking the necessary steps to counteract these trends or by modifying our activities to adjust ourselves to them. The discovery of these trends, the explanation of them, and planning the necessary adaptations, or programs, for dealing with them are important fields of activity of the Bureau.

NEW MARKETS FOR OLD

An important project during the year was a study of the wholesale fruit-and-vegetable markets in New York City, made at the request of Mayor LaGuardia, the California Fruit Growers' Exchange, the Florida Citrus Exchange, the American Fruit Growers, and a number of other trade and farm organizations. This study has not yet been completed but indications are that from 6 to 7 million dollars can be saved annually in the cost of handling fruits and vegetables in the markets of New York City. Accomplishing these savings will require extensive changes in the existing market set-up. Requests for studies have come from many additional cities.

BETTER MARKETS FOR PERISHABLES

Interest has continued to increase in the Bureau's studies dealing with the improvement of organization, facilities, and practices of wholesale markets handling fruits and vegetables and other perishables. In several cases this interest is resulting in the preparation of detailed plans for reorganization of markets more adequately to meet the needs of farmers and the public. As an outgrowth of Bureau studies new markets have been established or are being set up in Kansas City, Mobile, and Philadelphia.

The new market in Kansas City consists of more than 75 stores for wholesalers, each having direct rail connections for the placing of cars arriving over all railroads, about 400 sheds for farmers, a large cold-storage house, an auction building, and other facilities necessary to provide a thoroughly modern food terminal. This market is being built at a cost of more than \$4,000,000, and will not only meet the present needs of the Kansas City area, but is so designed that space is available for future expansion when and if it is needed. The provision of this market will correct a number of existing evils in the wholesale handling of perishable products in Kansas City. It will result in saving several hundred thousand dollars annually, including \$150,000 in cartage costs alone.

The new market in Mobile has been built in such a way as to provide an adequate space for serving the farmers of that part of Alabama. The new market facility in Philadelphia was established at practically no cost by inducing the Pennsylvania Railroad to open its excess facilities for the handling of motor-truck receipts, thereby creating a centralized wholesale market in Philadelphia handling both rail and motor-truck receipts. The willingness of the railroad to enter into this venture marks a departure from its previous policy of building markets for the exclusive use of produce arriving over its own lines. It is believed that if the markets in Philadelphia could be completely centralized there would be savings of some 1 or 2 million dollars annually in total costs of handling, including nearly half a million dollars' saving in cartage costs alone.

Progress has been made toward the development of a new market in Atlanta. Land has been bought, and the plan is to set up a public corporation that will build a complete unified market in an area large enough not only to take care of current business but to provide for future expansion. As soon as this corporation is set up, the whole program is to be pushed to rapid completion.

MARKET NEEDS IN THE SOUTHEAST

In cooperation with the agricultural colleges of four Southeastern States the Bureau has been studying the market needs in that area to decide where concentration markets should be established, how many there should be, how they should be equipped and operated. During the current year it is expected that the final report can be prepared making definite recommendations for establishing an adequate marketing system for fruits and vegetables in this area.

A study was undertaken to find out what is necessary to modernize the Richmond market. Much information has been assembled, contacts have been made with all of the interested persons and agencies, and a preliminary report describes the existing situation and indicates what improvements should be made in order to provide a market that will adequately serve the city of Richmond.

BETTER MARKET SERVICES

Market news is one of the most useful services the Government provides to agriculture. It keeps farmers and dealers informed concerning prices and market conditions throughout the country and thus encourages and promotes orderly marketing. That these services may be most useful, it is necessary to make detailed studies

of the accuracy and adequacy of the information obtained and published. These studies, during the year, dealt particularly with livestock, butter, and tobacco.

Rapid increase in the direct marketing of livestock in recent years has made it especially difficult to report useful information on shipments, movements to market, and receipts. Years ago such material reported by the railroads was reasonably satisfactory, but now a substantial proportion of livestock moves by motortruck. Ways to report this movement are being developed in cooperation with several State agencies.

Cooperative methods have been worked out to report the direct marketing of stocker and feeder cattle and sheep from range States to feed lots and pastures in the Corn Belt. Arrangements also have been made for the issuance of weekly reports by the Agricultural Marketing Service on marketings of livestock for slaughter. These reports cover 73 to 83 percent of the total slaughter for the country as a whole, and should be a good index of weekly and monthly changes in total slaughter.

For many years there have been controversies about the Chicago butter quotations which are used widely as a basis for buying and selling butter over a large part of the country. Farmers and others have complained that quotations do not accurately reflect the true butter market. The Bureau is cooperating with the Agricultural Marketing Service and with Northwestern University in a detailed study that will attempt to find improved methods of quoting the market. Much information has been gathered and some preliminary analyses have been made to include both a study of the accuracy of the price quotations and some study of the accuracy and usefulness of the butter grades and butter inspection which, of course, are closely related to the market-news problem.

Quoting of prices of tobacco is one of the most difficult of market-news problems. There appears to be considerable variation in prices of different lots of tobacco of approximately the same quality, sold in the same market, on the same day. The Bureau has obtained complete records of actual prices obtained by tobacco growers in a number of markets, and has analyzed this material in some detail as a preliminary to considering the policies that need to be followed to provide farmers with useful information on prices of tobacco. These studies have made possible some improvements in the tobacco market news material of the Agricultural Marketing Service.

MILK-MARKETING POLICIES

Municipal, State, and Federal Governments have been developing gradually a number of programs to regulate the marketing of milk and dairy products. These include regulations by local boards of health, by State milk boards and other State agencies, and the marketing agreements and orders of the Federal Government. Regulations cover a wide field, including the inspection of milk, the demarcation of milk sheds, the fixing of milk prices, and the regulation of pooling arrangements. The general objective of all such regulations should be to provide economical methods of marketing, to assure the consumers an adequate supply of safe milk, and in general to encour-

age desirable changes both in the production and in the distribution of milk and dairy products.

The Bureau is cooperating with the six agricultural experiment stations in New England in a series of studies dealing with problems of milk marketing. These are intended eventually to work out a marketing program including the country problems of assembling and shipping milk, the city problem of distribution, and the problem of assistance and regulation by public agencies.

Major emphasis during the year has been on the country end of marketing. Each of the six experiment stations made studies of local milksheds, including analyses to determine factors influencing the size and location of the supply areas for the principal markets in each State. Three of the States made detailed studies of the trucking of milk, including analyses of trucking rates, and of possible economies in reorganizing and relocating trucking routes. Several of the States are studying milk prices, with particular emphasis on detailed analyses of factors influencing the prices received by different groups of producers. Some detailed work has dealt with measuring the elasticity of the supply of milk in Vermont.

The principal contribution of the Bureau has been in studying the organization and location of milk plants and of the major milksheds in New England. The purpose is to discover changes that might be made in the number, sizes, kinds, and locations of milk plants and in the boundaries of milksheds for greater efficiency in the milk-marketing system. Detailed analyses of the cost of operation of typical milk plants, and of the costs of collecting milk from the surrounding farms and shipping to consuming markets are required. During the coming year the studies in New England will begin to emphasize more the problems of city distribution.

The Bureau's studies of markets in general have indicated many concrete ways of reducing distribution costs and improving methods of handling. But in all of the work thus far the Bureau has been handicapped in getting satisfactory improvements by the lack of some agency to take the initiative in putting into effect a definite program. It will probably require State and Federal legislation to bring about the construction and operation of new markets so that the possible savings may be effected and the public interests safeguarded.

The produce trade interested in these studies is cooperating as well as it can to make indicated improvements. But in most cases they are finding that they are not able by themselves to bring about such changes. It appears only a matter of time before this Department of the Federal Government will be called upon to formulate policies regarding legislative action on these problems.

MARKETING COSTS AND CHARGES

A most popular and useful line of fundamental research carried on during the last few years has been a study of marketing costs and charges. Work on price spreads between farmers and consumers for 58 food products was continued with the publication of an annual supplement to the existing report early in 1939, and the regular issue of monthly releases. Special studies are under way to provide more adequate price-margin comparisons for cotton goods and clothing and for wheat flour and bread.

The most striking feature of price spreads for all 58 foods treated as a single composite is their stability during the last 4 years. The remarkable agreement of annual changes in price spreads and hourly wage rates that had persisted for 14 years was interrupted in 1936-37 when wage rates made a sudden rise.

These statistical studies show also that the farmer gets less than half of each dollar the consumer spends for food. The total annual bill for processing, marketing, and distributing farm products amounts to more than the total income received by farmers.

It is not enough to gather and summarize data on total spread between prices at the farm and prices in city retail stores. These must be analyzed in some detail in order to get a clear picture of recent trends in marketing costs and charges, and to understand how marketing costs are affected by changes in marketing methods, changes in wage rates, and many other developments in the marketing processes and in the general economic system. It is necessary also to understand these marketing costs and charges in some detail in order to know which parts of the marketing system account for the greatest share of the cost. An intimate knowledge of these detailed facts is helpful as a guide to further and more detailed work on market organization for the purpose of studying possible improvements in the system which have promise of greater efficiency and lower costs.

Considerable attention is being given the problem of how the price-making forces operate, in order to have some assurance that the prices for farm products actually reflect the supply and demand conditions. During the last few years there has been a great deal of purchasing by large-scale organizations directly from producing areas with the prices based on market prices in the central markets for products that are moving through the regular channels. The effect of this on the price-making processes is an important consideration. Similarly, the prices in large city markets, the prices established on organized exchanges, and in other organized institutions and markets are often an important determining factor in the prices paid to farmers.

The Department of Agriculture has broad authority to study marketing methods and practices and to consider changes for the purpose of improving marketing policies for bettering the market system. To perform fruitful work in this field, it is necessary to carry on considerable fundamental research including the gathering, summarization, and analysis of large quantities of factual and statistical material describing marketing methods, costs, charges, trends, and conditions, and pricing mechanisms. The work of the Bureau is not limited to the compilation and summarization of such information but includes detailed analyses and interpretations leading to recommendations for possible changes in marketing methods and practices.

COTTON PRICES

Emphasis has been placed on studies of cotton prices. Information collected during the seasons 1928-32 showed conclusively that prices to growers in many local cotton markets reflected only a small proportion of central-market premiums and discounts for grade and staple length. Apparently, one of the reasons was the lack of ade-

quate information on the classification of cotton at the time it was sold.

Classification services have been made available to growers in a few markets and information has been collected to ascertain the influence of these services on prices to growers and on the quality of cotton produced. Studies indicate that grade and staple premiums and discounts to growers varied directly with the reliability and general acceptability of the classification on the basis of which the cotton was sold. Aside from premiums and discounts on an individual-bale basis, farmers who sold in local markets where the average quality was relatively high usually received correspondingly higher prices than those who sold in local markets where the average quality was relatively low; but the average level of prices was little, if any, higher in markets with a public classification service than in those without such a service.

These findings suggest that, unless the public classification service is associated with material changes in marketing methods and practices other than varying prices on the basis of quality, the possibilities of raising the price level in specific local markets by means of such a classification service are limited chiefly to the influence of improvements in quality brought about by the classification service.

Analysis of cotton prices in spot and futures markets shows, among other things, that the analysis of the supply-demand price relationships is handicapped by a lack of adequate measures, or indicators, of the market supplies of and the demand for cotton. But, despite the imperfections of these measures or indicators, it was shown that variations in the average annual price of Middling $\frac{7}{8}$ -inch spot cotton in the 10 designated markets are accounted for largely by changes in the purchasing power of the dollar as indicated by the Index of Wholesale Prices of All Commodities, by changes in the supply as indicated by world total of all cotton, and by changes in the demand for cotton as indicated by changes in the World Index of Industrial Production.

DISTRIBUTION AND ORGANIZATION

One of the important marketing developments of recent years is the growth of large-scale food distribution. Farmers are directly concerned with the effects of this development on the prices for their products, and hence with the public policy adopted toward large-scale food concerns. This Bureau has been engaged in a series of studies to show how farmers are affected by the growth of large food concerns and how they might best deal with some of the major problems. Studies include chain-store distribution of fruits and vegetables; dollar sales, capitalization and earnings of leading food and tobacco corporations; retail sales campaigns for farm products; large-scale organization in the dairy industry; and the patent situation in the food industries.

The Department has been authorized to make broad economic studies of the marketing system for the purpose of finding out how the system operates, what its weaknesses are, and what changes should be made to make it more efficient in serving the farmer and the public. The work on market organization includes studies of organization and structure of markets for farm products, the efficiency of existing

facilities for the processing, distribution, and sale of these products, the relative desirability and efficiency of the different marketing channels, the different types of business organizations and institutions in the field of marketing, and the development of new and extended uses for farm and food products.

NEW OUTLETS FOR FARM PRODUCTS

Studies are being made of economic possibilities of new markets for agricultural products. At present this work is limited to new markets for cotton. Three studies completed on the utilization of cotton and competing materials dealt with the use of cotton for fertilizer bags, cordage and twine, and hosiery.

Technical research deals with the developing of new products. During the year the Post Office Department agreed to make trials of cotton twine in tying bundles of letters. In the past jute twine has been used almost exclusively for this purpose. The Bureau cooperated with the Navy Department to develop parachute cords of cotton in place of the present cords now made of silk. This potential use of cotton is not large, but it is obviously important in case of war. Cooperation was maintained with a number of other agencies in the development of specifications for fabrics, including specifications used by the Agricultural Adjustment Administration in its cotton-diversion program, by the Agricultural Marketing Service for certain coverings for cotton bales and by the Bureau of Public Roads for soil-fixation in cuts and fills.

THE FARMER'S INTEREST IN FREIGHT RATES

To prevent further increases in freight rates on agricultural products, the Secretary and his representatives intervened in a number of cases before the Interstate Commerce Commission during the year. Cases in point involved attempts of the railroads to increase by amounts ranging up to 10 percent the transcontinental rail rates on fresh deciduous fruits and fresh vegetables; a current effort of the railroads to secure authorization from the Commission to increase the estimated weights on packages of citrus fruits and vegetables and fresh deciduous fruits and vegetables which, if secured, would have the effect of greatly increasing transportation charges to agricultural shippers; the plan of the railroads to increase indirectly by approximately 17½ percent the freight charges for transporting stocker and feeder livestock, by so changing the rules and regulations governing feeder rates as to greatly restrict the opportunities to use the 85-percent rates that have applied for many decades; and efforts to increase the rates on cotton, grain, and grain products, and express shipments of perishables.

The Secretary of Agriculture on January 18, 1938, appeared before the Interstate Commerce Commission in the fifteen-percent case, 1937-38, to take a position in opposition to a proposed horizontal increase of 15 percent in rail freight rates. He pointed out both the serious burden that would be imposed upon agriculture by such a large increase at a time when farm prices and income were declining and the inconsistency of the projected rate increase with the long-run

interests of both the railroads and farmers. The Secretary's testimony was effective in preventing an increase larger than the 5 percent authorized on farm products by the Commission in March 1938 which compares very favorably with the 10-percent increase authorized on most industrial commodities. Subsequently, the railroads have made a general attempt to raise rates on farm products which in recent years had fallen below maximum levels prescribed by the Interstate Commerce Commission before the depression of the early 1930's.

FREIGHT-RATE DIFFERENTIALS AND INDEXES

Preliminary survey of freight-rate differentials between territories was made during the year. Opponents of present rate adjustments maintain that if rates from points within a destination territory, usually the official territory, to a market, distance considered, are lower than rates from another territory to the same market the interterritorial shipments are burdened without just cause. Preliminary surveys indicate that the bulk of interregional competition among agricultural shippers centers in efforts of agricultural producers from the South, Southwest, and West to reach the populous markets of the East. Apparently much of the agitation with respect to the problem of these freight-rate differentials emanates from industrial sources interested in attracting industries to the South and West. Although agriculture's interest in this issue may not be so great as popularly urged, farmers might find the barrier of distance of less importance if industrial production with its attendant population were to increase in communities in the South and West closer to their farms. This might also provide an employment outlet for surplus farm population.

Substantial progress was made toward the completion of a series of indices of railroad freight rates on fruit and vegetable shipments in the United States. The plan is to develop national indices for principal individual commodities, for subgroups of commodities, and for fruits and vegetables as a whole. In prospect also are indices of railroad freight rates applying on commodities as classified above from their principal origins to various destinations important to the given producing areas. A further plan calls for indices of rates for as many of the commodity classes as possible applying on shipments from whatever origins in the United States to the largest individual markets, for example, on all fruits and vegetables shipped by rail to New York City from representative origins.

The extent to which these indices can be extended from the general to the particular will depend primarily upon the availability of freight rates applying on the given commodity classifications from and to the selected representative origins and destinations. The value of the indices will depend to a lesser degree upon the quality of the possible analyses of traffic quantities. It is not believed that the construction of indices of motortruck rates is possible with the data now available. Revisions of the currently published indices of railroad freight rates applying on shipments of wheat, cotton, and livestock, are planned. Although revision of the formulas from a mathematical standpoint is envisioned, the revision will be designed mainly to take account of the changed character of the traffic.

TRANSPORTATION RESEARCH

In an effort to clarify the economic problems relating to the transportation of farm products and to suggest specific policies and measures for their solution in the interest of both agriculture and the public, a program of economic research is now being planned and conducted.

Studies of ways and means to obtain more satisfactory railroad-rate adjustments on farm products are under way. An inquiry into the intent of the Congress in instituting regulation of motor-carrier rates by the Interstate Commerce Commission and an examination of the Commission's actions and policies with respect to motor rates to ascertain the economic effects of these policies upon agriculture form one important project. The program includes studies of freight-rate differentials that exist throughout the United States, the probable economic effects of applying a uniform mileage scale for a given commodity throughout the country, fluctuations in freight rates on farm products, and the factors contributing to these fluctuations. Alternative policies by means of which the efficiency of the transportation system as a whole could be improved through promotion and regulatory policy are being appraised.

